

## EAST Search History

| Ref # | Hits | Search Query  | DBs  | Default Operator | Plurals | Time Stamp       |
|-------|------|---|--|------------------|---------|------------------|
| S1    | 2    | ("20040192394").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2008/01/18 15:37 |
| S3    | 1    | (antenna near2 branch) same select\$4 same ((largest adj signal) or (highest signal quality)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/01/18 13:58 |
| S4    | 1    | diversity and espar and select\$4 same ((largest adj signal) or (highest signal quality))     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/01/18 13:59 |
| S5    | 0    | diversity and espar and select\$4 with (antenna adj array adj branch)                         | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/01/18 14:00 |
| S6    | 0    | diversity and espar and select\$4 with (antenna near3 array with branch)                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/01/18 14:00 |
| S7    | 16   | diversity and select\$4 with (antenna near3 array with branch)                                | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | ADJ              | ON      | 2008/01/18 14:00 |
| S9    | 2    | ("6745009").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2008/01/18 14:20 |

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|     |    |   |  |    |     |                  |
|-----|----|---|--|----|-----|------------------|
| S12 | 2  | ("20040139897").PN.                                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/18 15:15 |
| S13 | 2  | ("6492942").PN.                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/18 15:16 |
| S14 | 2  | ("6677898").PN.                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/18 15:16 |
| S15 | 3  | ("6407719"   "6492942").PN. OR<br>("6677898").URPN. | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/18 15:16 |
| S16 | 62 | ((JUN) near2 (CHENG)).INV.                          | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/18 15:18 |
| S17 | 2  | ("20040135723").PN.                                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/18 15:39 |
| S18 | 2  | ("6327314").PN.                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/18 15:41 |
| S19 | 2  | ("6389085").PN.                                     | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/18 15:43 |

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|     |     |  |  |    |     |                  |
|-----|-----|--|--|----|-----|------------------|
| S20 | 492 | diversity and ((adaptive near2 array) or espar) and (select\$3 with (array or branch or (group near2 antenna)))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/18 15:53 |
| S21 | 8   | S20 and perturb\$4   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/18 15:45 |
| S22 | 91  | S20 and (high\$3 or best) near2 ((signal adj (quality or strength)) or SNR or S\$1N or C\$1I or SNIR)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/18 15:50 |
| S23 | 2   | ("7180956").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/18 15:48 |
| S24 | 487 | diversity and ((adaptive near2 array) or espar) and (select\$3 with (array or branch or (group near2 antenna) with (high\$3 or best) near2 ((signal adj (quality or strength)) or SNR or S\$1N or C\$1I or SNIR))) | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/18 15:53 |
| S25 | 2   | ("20040192394").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/19 12:45 |
| S26 | 2   | ("6232927").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/19 12:48 |

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|     |    |   |  |    |     |                  |
|-----|----|---|--|----|-----|------------------|
| S27 | 2  | ("5239541").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/19 12:49 |
| S28 | 2  | ("7315733").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/19 12:50 |
| S29 | 2  | ("6553078").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/19 12:51 |
| S30 | 2  | ("20020193146").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/19 12:53 |
| S31 | 2  | ("20060232492").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/19 12:53 |
| S32 | 1  | ((TAKUMA) near2 (SAWATANI)).<br>INV.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 12:59 |
| S33 | 4  | ((KYOICHI) near2 (IIGUSA)).INV.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 12:59 |
| S34 | 10 | ((MAKOTO) near2 (TAROMARU)).<br>INV.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:00 |
| S35 | 8  | ("4814882"   "4977616"  <br>"5465411"   "5561673"  <br>"5991613"   "6067449"  <br>"6118773").PN. OR ("6721550").<br>URPN. | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:01 |

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|     |     |  |  |    |     |                  |
|-----|-----|--|--|----|-----|------------------|
| S37 | 1   | espar and (selection near2 diversity)  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:04 |
| S38 | 85  | (espar or (adaptive adj array)) and (selection near2 diversity)                                  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:08 |
| S39 | 9   | (espar or (adaptive adj array)) and (selection near2 diversity) and (weight\$4 adj coefficients) | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:10 |
| S40 | 2   | (espar) and (diversity) and (weight\$4 adj coefficients)   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:11 |
| S41 | 20  | (espar) and (diversity)  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:12 |
| S42 | 4   | ("6369770"   "6492942"   "6788268").PN. OR ("6961026").URPN.                                     | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:15 |
| S44 | 462 | (adjust\$4 or updat\$4) same (plurality near3 (array\$1) with antenna)                           | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:27 |
| S45 | 10  | ((adjust\$4 or updat\$4) near2 weight) same (plurality near3 (array\$1) with antenna)            | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:20 |
| S46 | 115 | ((adjust\$4 or updat\$4) near2 weight) and (plurality near2 (array\$1) near3 antenna)            | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:21 |
| S47 | 113 | ((adjust\$4 or updat\$4) near2 weight) and (plurality near2 (array\$1) near2 antenna)            | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:21 |
| S48 | 20  | S47 and (select\$4 near2 (branch or array or group))   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:27 |
| S49 | 2   | ("5557646").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/19 13:27 |
| S50 | 27  | (adjust\$4 or updat\$4) same (plurality near2 antenna adj (array\$1))                            | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/19 13:28 |

## EAST Search History

| Ref # | Hits | Search Query   | DBs  | Default Operator | Plurals | Time Stamp       |
|-------|------|--|--|------------------|---------|------------------|
| S1    | 2    | ("6771988").PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | OFF     | 2008/01/30 06:25 |
| S2    | 16   | ("20020123372"   "20030129996"   "6061553"   "6397082"   "6512917"   "6556845").PN. OR ("6771988").URPN.                 | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 07:14 |
| S4    | 20   | (plural or plurality) near4 antenna\$1 near3 arrays with select\$4 near array  | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 07:16 |
| S7    | 18   | (plural or plurality) near4 antenna\$1 near3 arrays with select\$4 same beamform\$4                                      | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 07:18 |
| S8    | 41   | (plural or plurality) near4 antenna\$1 near3 arrays same select\$4 same beamform\$4                                      | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 07:18 |
| S9    | 4    | ("6714584"   "6946993"   "7103120"   "7209512").PN. OR ("7315589").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 07:23 |
| S10   | 7    | ("20010028675"   "20030224751"   "20040027268"   "5676147"   "5796779"   "6473037"   "6504515").PN. OR ("6850190").URPN. | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 07:27 |
| S12   | 7    | ("20010028675"   "20030224751"   "20040027268"   "5676147"   "5796779"   "6473037"   "6504515").PN. OR ("6850190").URPN. | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 07:30 |
| S14   | 10   | ("5610617"   "5907816"   "6009124"   "6118767"   "6233466"   "6236866"   "6347234"   "6473616").PN. OR ("7039441").URPN. | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 08:56 |
| S16   | 317  | (select\$4 or choos\$4 or chosen) near2 (antenna adj array)  | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 08:58 |
| S19   | 4    | S16 and perturb\$5   | US-PGPUB;<br>USPAT;<br>USOCR   | OR               | ON      | 2008/01/30 08:58 |

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|     |     |   |  |    |     |                  |
|-----|-----|---|--|----|-----|------------------|
| S20 | 181 | (selecting or selected) near2<br>(antenna adj array)  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:08 |
| S21 | 85  | S20 and weight\$4   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:08 |
| S23 | 99  | (selecting or selected or selection)<br>near (antenna adj array)  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:26 |
| S24 | 49  | S23 and weight\$4   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:10 |
| S27 | 12  | ("3737899"   "3811128"  <br>"4380012"   "4667201"  <br>"4766438"   "4924235"  <br>"5281974").PN. OR ("5355139").<br>URPN. | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:24 |
| S28 | 2   | ("5887038").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/30 09:24 |
| S30 | 0   | (adaptive adj antenna adj array)<br>with selection adj diversity  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:26 |
| S31 | 3   | (adaptive adj antenna adj array)<br>same selection adj diversity  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:28 |
| S32 | 153 | (adaptive adj antenna adj array)<br>same diversity  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:27 |
| S33 | 113 | (adaptive adj antenna adj array)<br>with diversity  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:27 |
| S35 | 1   | (adaptive adj antenna adj array)<br>with select\$4 with diversity   | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:28 |
| S36 | 2   | ("6249251").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/30 09:28 |

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|     |     |   |  |    |     |                  |
|-----|-----|---|--|----|-----|------------------|
| S37 | 46  | (adaptive adj antenna adj array)<br>and selection adj diversity | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 09:42 |
| S38 | 2   | ("6492942").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/30 09:43 |
| S39 | 2   | ("20020050948").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/30 09:43 |
| S40 | 2   | ("6477213").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/30 10:19 |
| S41 | 153 | ((KENICHI) near2 (MIYOSHI)).<br>INV.                            | US-PGPUB;<br>USPAT;<br>USOCR   | OR | ON  | 2008/01/30 11:05 |
| S42 | 2   | ("6292135").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>FPRS;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/30 11:05 |